Preparation, Characterization and Evaluation of Encapsulated Eggplant Peel Extract in Edible Oil

Salient features

- Eggplant peel extract (EPE) is sensitive to pH and also exhibited antibacterial potential against Gram-positive bacteria and Gram-negative bacteria.
- Water-in-oil (W/O) EPE nanoemulsions was formulated with high stability and monodispersity.
- EPE nanoemulsion formulation improved solubility of the hydrophilic bioactive compounds of eggplant peel extract in soybean oil.
- EPE nanoemulsion formulation increased oxidative stability of soybean oil.
- EPE nanoemulsion formulation is organoleptically acceptable.

Advantages

- ✓ EPE showed a high level of total phenol content and exhibited higher antioxidant activity in comparison to the local varieties as per literature.
- ✓ Soybean oil free from synthetic antioxidant, TBHQ
- ✓ Soybean oil enriched with encapsulated natural antioxidants.
- ✓ EPE nanoemulsion formulations showed higher oxidative stability than commercially available soybean oil.
- ✓ EPE could be a natural source of an antibacterial agent and also as a color sensor with future applicability in active and intelligent packaging.

Process Technology developed by

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